



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/573,172

03/22/2006

Uwe Zulehner

BE9264PCTUS

6657

22203 7590 03/06/2009  
KUSNER & JAFFE  
HIGHLAND PLACE SUITE 310  
6151 WILSON MILLS ROAD  
HIGHLAND HEIGHTS, OH 44143

EXAMINER

FOGARTY, CAITLIN ANNE

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

03/06/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/573,172	<b>Applicant(s)</b> ZULEHNER ET AL.	
	<b>Examiner</b> CAITLIN FOGARTY	<b>Art Unit</b> 1793	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 December 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Status of Claims***

1. Claims 1 – 13 are pending where claims 1, 3, 10, and 12 have been amended.

### ***Status of Previous Objections and Rejections***

2. The objection to the specification is withdrawn in view of the amended specification filed December 16, 2008.

The objection to claim 1 is withdrawn in view of the amended claims filed December 16, 2008.

The 35 U.S.C. 112 second paragraph rejection of claim 12 is withdrawn in view of the amended claims filed December 16, 2008.

The 35 U.S.C. 102(b) rejection of claims 1 – 10 and 13 as being anticipated by Wells et al. (US 5,371,759) is maintained.

The 35 U.S.C. 103(a) rejection of claim 11 as being unpatentable over Wells et al. (US 5,371,759) in view of Wells et al. (US 5,465,942) is maintained.

The 35 U.S.C. 103(a) rejection of claim 12 as being unpatentable over Wells et al. (US 5,371,759) in view of Raskin (US 2,933,259) is maintained.

### ***Claim Rejections - 35 USC § 102***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1 – 10 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Wells et al. (US 5,371,759).

Wells is applied to claims 1 – 10 and 13 as set forth in the September 30, 2008 Office action. The amendments to claims 3 and 10 merely correct the claim language and do not change the scope of the claims.

With respect to the amended features of claim 1, col. 5 lines 2-39, Fig. 1, and Fig. 2 of Wells disclose that the nozzle element has heat-conducting elements (18 and see Fig. 2) which are in contact with the metal jacket (41) and extend into the refractory material. The heat-conducting elements (18) of Wells would be capable of absorbing heat and conveying it rapidly to the metal jacket (41) because the heat-conducting elements are made of steel (see col. 6 lines 8-28) and are cemented into the nozzle refractory body (31-see col. 5 lines 2-5). Therefore, when the refractory material of the nozzle body becomes heated, the steel heat-conducting elements would be expected to absorb heat and convey it rapidly to the metal jacket since the heat-conducting elements (18) of Wells are made of steel are in contact with the metal jacket (41) as seen in Fig. 2.

***Claim Rejections - 35 USC § 103***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wells et al. (US 5,371,759) as applied to claim 10 above, and further in view of Wells et al. (US 5,465,942-hereafter US '942).

Wells in view of US '942 is applied to instant claim 11 as set forth in the September 30, 2008 Office action.

Art Unit: 1793

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wells et al. (US 5,371,759) as applied to claim 1 above, and further in view of Raskin (US 2,933,259).

The amendment to claim 12 merely corrected the claim language and did not change the scope of the claim. Therefore, Wells in view of Raskin is applied to instant claim 12 as set forth in the September 30, 2008 Office action.

### ***Response to Arguments***

8. Applicant's arguments filed December 16, 2008 have been fully considered but they are not persuasive.

*Arguments are summarized as follows:*

It is submitted that US '759 does not teach, suggest, or show a heat-conducting element for absorbing heat and rapidly conveying the heat to a metal jacket, as defined in claim 1. In order for bar 11 or tube 18 of US '759 to absorb heat and convey it to the metal jacket, bar 11 and tube 18 would have to come in contact with the molten bath in the furnace. However, this is not possible as any molten metal which would come in contact with bar 11 or tube 18 would flow in the annular duct 17 defined between bar 11 and tube 18, and hence would clog duct 17. Furthermore, in regards to the rejections of claims 11 and 12, US '942 fails to teach, suggest, or show the deficiencies noted above regarding the US '759 patent.

*Examiner's responses are as follows:*

The Examiner disagrees with Applicant that in order for tube 18 of US '759 to absorb heat and convey it to the metal jacket, tube 18 would have to come in contact

Art Unit: 1793

with the molten bath in the furnace. The Examiner's position on the amended feature of instant claim 1 is discussed in the 35 U.S.C. 102(b) rejection above.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAITLIN FOGARTY whose telephone number is (571)270-3589. The examiner can normally be reached on Monday - Friday 8:00 AM - 5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1793

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/  
Supervisory Patent Examiner, Art  
Unit 1793

CF